

**Corrigé de l'exercice 1**

Calculer les expressions suivantes et donner le résultat sous la forme d'une fraction irréductible.

$$A = \frac{-90}{7} - \frac{-9}{35} \div \frac{9}{7}$$

$$A = \frac{-90}{7} - \frac{-9}{35} \times \frac{7}{9}$$

$$A = \frac{-90}{7} - \frac{-1 \times 9}{5 \times 7} \times \frac{1 \times 7}{1 \times 9}$$

$$A = \frac{-90}{7} - \frac{-1}{5}$$

$$A = \frac{-90 \times 5}{7 \times 5} - \frac{-1 \times 7}{5 \times 7}$$

$$A = \frac{-450}{35} - \frac{-7}{35}$$

$$A = \frac{-443}{35}$$

$$B = \frac{10}{9} + 3$$

$$B = \frac{-9}{5} - 9$$

$$B = \frac{10}{9} + \frac{3 \times 9}{1 \times 9}$$

$$B = \frac{10}{9} + \frac{27}{9}$$

$$B = \frac{10}{9} + \frac{27}{9}$$

$$B = \frac{37}{9} \div \frac{-54}{5}$$

$$B = \frac{37}{9} \times \frac{-5}{54}$$

$$B = \frac{37}{-9 \times 1} \times \frac{5 \times -1}{54}$$

$$B = \frac{-185}{486}$$

$$C = \frac{10}{7} \div \left( \frac{-6}{13} + \frac{9}{5} \right)$$

$$C = \frac{10}{7} \div \left( \frac{-6 \times 5}{13 \times 5} + \frac{9 \times 13}{5 \times 13} \right)$$

$$C = \frac{10}{7} \div \left( \frac{-30}{65} + \frac{117}{65} \right)$$

$$C = \frac{10}{7} \div \frac{87}{65}$$

$$C = \frac{10}{7} \times \frac{65}{87}$$

$$C = \frac{650}{609}$$

**Corrigé de l'exercice 2**

Calculer les expressions suivantes et donner le résultat sous la forme d'une fraction irréductible.

$$A = \frac{10}{7} \times \left( \frac{-4}{7} + \frac{11}{12} \right)$$

$$A = \frac{10}{7} \times \left( \frac{-4 \times 12}{7 \times 12} + \frac{11 \times 7}{12 \times 7} \right)$$

$$A = \frac{10}{7} \times \left( \frac{-48}{84} + \frac{77}{84} \right)$$

$$A = \frac{10}{7} \times \frac{29}{84}$$

$$A = \frac{5 \times 2}{7} \times \frac{29}{42 \times 2}$$

$$A = \frac{145}{294}$$

$$B = \frac{-81}{13} - \frac{81}{65} \div \frac{-9}{52}$$

$$B = \frac{-81}{13} - \frac{81}{65} \times \frac{-52}{9}$$

$$B = \frac{-81}{13} - \frac{9 \times 9}{-5 \times 13} \times \frac{4 \times -13}{1 \times 9}$$

$$B = \frac{-81}{13} - \frac{-36}{5}$$

$$B = \frac{-81 \times 5}{13 \times 5} - \frac{-36 \times 13}{5 \times 13}$$

$$B = \frac{-405}{65} - \frac{-468}{65}$$

$$B = \frac{63}{65}$$

$$C = \frac{-8}{7} - 4$$

$$C = \frac{8}{9} - 5$$

$$C = \frac{-8}{7} - \frac{4 \times 7}{1 \times 7}$$

$$C = \frac{-8}{9} - \frac{28}{9}$$

$$C = \frac{-8}{9} - \frac{28}{9}$$

$$C = \frac{-36}{7} \div \frac{-37}{9}$$

$$C = \frac{-36}{7} \times \frac{-9}{37}$$

$$C = \frac{-36}{-7 \times -1} \times \frac{9 \times -1}{37}$$

$$C = \frac{324}{259}$$

**Corrigé de l'exercice 3**

Calculer les expressions suivantes et donner le résultat sous la forme d'une fraction irréductible.

$$A = \frac{24}{5} + \frac{-6}{5} \div \frac{1}{5}$$

$$A = \frac{24}{5} + \frac{-6}{5} \times 5$$

$$A = \frac{24}{5} + \frac{-6}{1 \times 5} \times \frac{1 \times 5}{1}$$

$$A = \frac{24}{5} + -6$$

$$A = \frac{24}{5} + \frac{-6 \times 5}{1 \times 5}$$

$$A = \frac{24}{5} + \frac{-30}{5}$$

$$A = \frac{-6}{5}$$

$$B = \frac{-1}{2} \div \left( \frac{5}{2} + \frac{4}{9} \right)$$

$$B = \frac{-1}{2} \div \left( \frac{5 \times 9}{2 \times 9} + \frac{4 \times 2}{9 \times 2} \right)$$

$$B = \frac{-1}{2} \div \left( \frac{45}{18} + \frac{8}{18} \right)$$

$$B = \frac{-1}{2} \div \frac{53}{18}$$

$$B = \frac{-1}{2} \times \frac{18}{53}$$

$$B = \frac{-1}{1 \times 2} \times \frac{9 \times 2}{53}$$

$$B = \frac{-9}{53}$$

$$C = \frac{\frac{2}{3} - 4}{-8 - 2}$$

$$C = \frac{\frac{2}{3} - \frac{4 \times 3}{1 \times 3}}{\frac{-8}{7} - \frac{2 \times 7}{1 \times 7}}$$

$$C = \frac{\frac{2}{3} - \frac{12}{3}}{\frac{-8}{7} - \frac{14}{7}}$$

$$C = \frac{-10}{3} \div \frac{-22}{7}$$

$$C = \frac{-10}{3} \times \frac{-7}{22}$$

$$C = \frac{-5 \times 2}{-3 \times 1} \times \frac{7 \times 1}{11 \times 2}$$

$$C = \frac{35}{33}$$

**Corrigé de l'exercice 4**

Calculer les expressions suivantes et donner le résultat sous la forme d'une fraction irréductible.

$$A = \frac{-6}{7} \div \left( \frac{5}{3} - \frac{1}{7} \right)$$

$$A = \frac{-6}{7} \div \left( \frac{5 \times 7}{3 \times 7} - \frac{1 \times 3}{7 \times 3} \right)$$

$$A = \frac{-6}{7} \div \left( \frac{35}{21} - \frac{3}{21} \right)$$

$$A = \frac{-6}{7} \div \frac{32}{21}$$

$$A = \frac{-6}{7} \times \frac{21}{32}$$

$$A = \frac{-3 \times 2}{1 \times 2} \times \frac{3 \times 7}{16 \times 2}$$

$$A = \frac{-9}{16}$$

$$B = \frac{7}{10} + 8$$

$$B = \frac{4}{3} - 3$$

$$B = \frac{\frac{7}{10} + \frac{8 \times 10}{1 \times 10}}{\frac{4}{3} - \frac{3 \times 3}{1 \times 3}}$$

$$B = \frac{\frac{7}{10} + \frac{80}{10}}{\frac{4}{3} - \frac{9}{3}}$$

$$B = \frac{87}{10} \div \frac{-5}{3}$$

$$B = \frac{87}{10} \times \frac{-3}{5}$$

$$B = \frac{87}{-10 \times 1} \times \frac{3 \times 1}{5}$$

$$B = \frac{-261}{50}$$

$$C = \frac{-77}{9} + \frac{55}{72} \div \frac{110}{81}$$

$$C = \frac{-77}{9} + \frac{55}{72} \times \frac{81}{110}$$

$$C = \frac{-77}{9} + \frac{1 \times 55}{8 \times 9} \times \frac{9 \times 9}{2 \times 55}$$

$$C = \frac{-77}{9} + \frac{9}{16}$$

$$C = \frac{-77 \times 16}{9 \times 16} + \frac{9 \times 9}{16 \times 9}$$

$$C = \frac{-1232}{144} + \frac{81}{144}$$

$$C = \frac{-1151}{144}$$

**Corrigé de l'exercice 5**

Calculer les expressions suivantes et donner le résultat sous la forme d'une fraction irréductible.

$$A = \frac{\frac{2}{3} + 10}{\frac{-7}{9} + 8}$$

$$A = \frac{\frac{2}{3} + \frac{10 \times 3}{1 \times 3}}{\frac{-7}{9} + \frac{8 \times 9}{1 \times 9}}$$

$$A = \frac{\frac{2}{3} + \frac{30}{3}}{\frac{-7}{9} + \frac{72}{9}}$$

$$A = \frac{32}{3} \div \frac{65}{9}$$

$$A = \frac{32}{3} \times \frac{9}{65}$$

$$A = \frac{32}{1 \times 3} \times \frac{3 \times 3}{65}$$

$$A = \frac{96}{65}$$

$$B = \frac{-14}{5} - \frac{-7}{20} \times \frac{-100}{63}$$

$$B = \frac{-14}{5} - \frac{-1 \times 7}{-1 \times 20} \times \frac{5 \times \cancel{20}}{9 \times 7}$$

$$B = \frac{-14}{5} - \frac{5}{9}$$

$$B = \frac{-14 \times 9}{5 \times 9} - \frac{5 \times 5}{9 \times 5}$$

$$B = \frac{-126}{45} - \frac{25}{45}$$

$$B = \frac{-151}{45}$$

$$C = \frac{-7}{2} \times \left( \frac{-9}{7} - \frac{-8}{5} \right)$$

$$C = \frac{-7}{2} \times \left( \frac{-9 \times 5}{7 \times 5} - \frac{-8 \times 7}{5 \times 7} \right)$$

$$C = \frac{-7}{2} \times \left( \frac{-45}{35} - \frac{-56}{35} \right)$$

$$C = \frac{-7}{2} \times \frac{11}{35}$$

$$C = \frac{-1 \times 7}{2} \times \frac{11}{5 \times 7}$$

$$C = \frac{-11}{10}$$

**Corrigé de l'exercice 6**

Calculer les expressions suivantes et donner le résultat sous la forme d'une fraction irréductible.

$$A = \frac{-4}{9} \div \left( \frac{9}{4} - \frac{11}{9} \right)$$

$$A = \frac{-4}{9} \div \left( \frac{9 \times 9}{4 \times 9} - \frac{11 \times 4}{9 \times 4} \right)$$

$$A = \frac{-4}{9} \div \left( \frac{81}{36} - \frac{44}{36} \right)$$

$$A = \frac{-4}{9} \div \frac{37}{36}$$

$$A = \frac{-4}{9} \times \frac{36}{37}$$

$$A = \frac{-4}{1 \times 9} \times \frac{4 \times 9}{37}$$

$$A = \frac{-16}{37}$$

$$B = \frac{25}{6} + \frac{-5}{12} \times \frac{3}{5}$$

$$B = \frac{25}{6} + \frac{-1 \times \cancel{3}}{4 \times \cancel{3}} \times \frac{1 \times \cancel{3}}{1 \times \cancel{3}}$$

$$B = \frac{25}{6} + \frac{-1}{4}$$

$$B = \frac{25 \times 2}{6 \times 2} + \frac{-1 \times 3}{4 \times 3}$$

$$B = \frac{50}{12} + \frac{-3}{12}$$

$$B = \frac{47}{12}$$

$$C = \frac{-5}{2} + 2$$

$$C = \frac{\frac{-5}{2} + 7}{4}$$

$$C = \frac{\frac{-5}{2} + \frac{2 \times 2}{1 \times 2}}{\frac{3}{4} + \frac{7 \times 4}{1 \times 4}}$$

$$C = \frac{\frac{-5}{2} + \frac{4}{2}}{\frac{3}{4} + \frac{28}{4}}$$

$$C = \frac{-1}{3} + \frac{2}{28}$$

$$C = \frac{-1}{2} \div \frac{31}{4}$$

$$C = \frac{-1}{2} \times \frac{4}{31}$$

$$C = \frac{-1}{1 \times 2} \times \frac{2 \times 2}{31}$$

$$C = \frac{-2}{31}$$